
Immunization

NO FLU SHOT

Definition: Respondents ages 65 and older who have not had an influenza vaccination within the past 12 months.

Prevalence of No Flu Shot

- South Dakota 22.1%
- There is no nationwide percent for no flu shot within past 12 months for 65 year olds and over

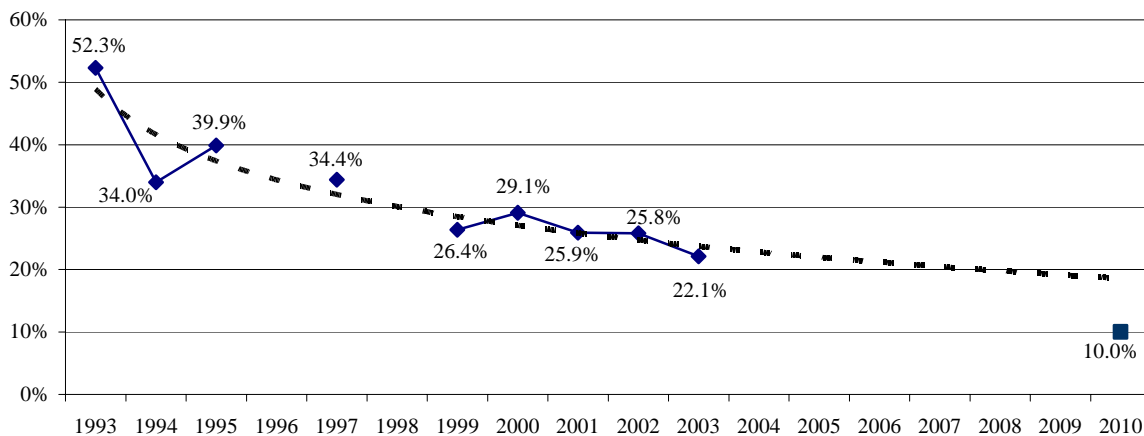
Healthy People 2010 Objective

Decrease the proportion of adults age 65 years and older who are not vaccinated annually against influenza to 10 percent.

Trend Analysis

Overall, the percent of respondents aged 65 and older who have not had an annual flu shot has been decreasing. South Dakota has not yet met the *Healthy People 2010 Objective* of 10 percent.

Figure 38
Percent of Respondents, Ages 65 and Older, Who Have Not Had a Flu Shot
Within the Past 12 Months, 1993-2003



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 1993-2003

Demographics

Gender There is no appreciable difference in the percent of those not getting a flu shot between males and females overall or for any demographic group between the two.

Age Lack of a flu shot greatly decreases for males from the 65-74 age group to the 75 and older group, however this decrease is not nearly as evident for females.

Race There is insufficient data to make any racial comparisons.

Region	There are no considerable differences among the four geographic regions with sufficient sample sizes for comparison.
Household Income	Lack of a flu shot seems to decrease slightly as household income increases, however the upper two household incomes had sample sizes too small for analysis.
Education	The lack of a flu shot seems to generally decrease as education levels increase.
Employment Status	Those who are self-employed demonstrate a much higher rate of no flu shot than those who are retired.
Marital Status	Those who are divorced show a much higher rate of no flu shot than those who are married or widowed.

Table 47
Respondents, Ages 65 and Older, Who Have Not Had a Flu Shot Within the Past 12 Months, 2003

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Total	1,399	22.1	(19.8-24.5)	506	19.8	(16.3-23.9)	893	23.7	(20.8-26.9)
Age									
18-24	-	-	-	-	-	-	-	-	-
25-34	-	-	-	-	-	-	-	-	-
35-44	-	-	-	-	-	-	-	-	-
45-54	-	-	-	-	-	-	-	-	-
55-64	-	-	-	-	-	-	-	-	-
65-74	690	25.3	(21.8-29.1)	272	25.2	(19.8-31.4)	418	25.4	(21.1-30.2)
75+	709	19.3	(16.4-22.6)	234	14.2	(10.2-19.5)	475	22.4	(18.6-26.8)
Race									
White	1,322	21.9	(19.5-24.4)	473	18.8	(15.4-22.9)	849	24.0	(21.0-27.3)
American Indian	*	*	*	*	*	*	*	*	*
Region									
Southeast	318	20.9	(16.5-26.0)	110	20.3	(13.4-29.5)	208	21.2	(16.0-27.6)
Northeast	433	22.3	(18.4-26.7)	159	17.5	(12.4-24.3)	274	25.9	(20.7-31.9)
Central	200	20.9	(15.3-27.8)	*	*	*	*	*	*
West	373	23.2	(19.0-28.0)	133	19.5	(13.4-27.4)	240	25.8	(20.4-32.1)
American Indian Counties	*	*	*	*	*	*	*	*	*
Household Income									
Less than \$15,000	281	21.5	(16.5-27.5)	*	*	*	*	*	*
\$15,000-\$19,999	198	21.1	(15.7-27.9)	*	*	*	*	*	*
\$20,000-\$24,999	201	18.7	(13.7-25.1)	*	*	*	*	*	*
\$25,000-\$34,999	210	18.7	(13.6-25.2)	*	*	*	*	*	*
\$35,000-\$49,999	140	17.7	(11.9-25.6)	*	*	*	*	*	*
\$50,000-\$74,999	*	*	*	*	*	*	*	*	*
\$75,000+	*	*	*	*	*	*	*	*	*
Education									
Less than High School	337	24.9	(20.3-30.2)	149	24.3	(17.7-32.2)	188	25.6	(19.4-33.0)
High School or G.E.D.	536	22.1	(18.5-26.2)	180	21.2	(15.5-28.4)	356	22.7	(18.3-27.9)
Some Post-High School	305	19.1	(14.8-24.2)	*	*	*	*	*	*
College Graduate	213	21.2	(15.6-28.1)	*	*	*	*	*	*
Employment Status									
Employed for Wages	131	18.4	(12.2-26.8)	*	*	*	*	*	*
Self-employed	104	33.8	(24.5-44.5)	*	*	*	*	*	*
Unemployed	*	*	*	*	*	*	*	*	*
Homemaker	*	*	*	*	*	*	*	*	*
Retired	1,092	20.8	(18.3-23.5)	383	18.4	(14.5-23.0)	709	22.5	(19.3-26.0)
Unable to Work	*	*	*	*	*	*	*	*	*

Table 47 (continued)
Respondents, Ages 65 and Older, Who Have Not Had a Flu Shot Within the Past 12 Months, 2003

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Marital Status									
Married/Unmarried Couple	622	21.4	(18.2-25.0)	328	19.0	(14.9-24.0)	294	24.3	(19.6-29.9)
Divorced/Separated	100	35.0	(25.9-45.4)	*	*	*	*	*	*
Widowed	623	21.0	(17.8-24.7)	102	16.0	(10.0-24.5)	521	22.0	(18.4-26.1)
Never Married	*	*	*	*	*	*	*	*	*

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2003

Note: *Results based on sample sizes less than 100 have been suppressed.

Further Analysis

Following are data illustrating the percent of those, ages 65 and older, who have not had a flu shot for various health behaviors and conditions. For example, 18.7 percent of respondents who stated they have fair or poor health had no flu shot, while 23.4 percent of respondents who stated they have excellent, very good, or good health had no flu shot.

Table 48
No Flu Shot, Ages 65 and Older, Within the Past 12 Months for Selected Health Behaviors and Conditions, 2003

Health Behavior or Condition	# Respondents	% No Flu Shot	95% CI
Fair or Poor Health Status	399	18.7	14.8-23.2
Excellent, Very Good, or Good Health Status	992	23.4	20.6-26.4
Obese	290	20.3	15.6-25.9
Overweight	832	20.2	17.4-23.3
Not Overweight	515	24.9	21.0-29.3
No Leisure Time Physical Activity	470	22.9	19.1-27.2
Leisure Time Physical Activity	929	21.6	18.9-24.7
No Moderate Physical Activity	882	21.7	19.0-24.8
Moderate Physical Activity	453	22.1	18.0-26.8
No Vigorous Physical Activity	1,280	21.6	19.2-24.1
Vigorous Physical Activity	*	*	*
Not Doing Anything to Control Weight	467	26.8	22.6-31.4
Trying to Lose or Maintain Weight	929	19.9	17.2-22.9
Less Than Five Servings of Fruits and Vegetables	977	21.9	19.2-24.9
At Least Five Servings of Fruits and Vegetables	422	22.4	18.4-27.1
Current Smoker	135	22.4	15.8-30.8
Former Smoker	552	18.5	15.4-22.0
Never Smoked	710	25.0	21.5-28.8
Smokeless Tobacco Use	*	*	*
No Smokeless Tobacco Use	1,353	21.8	19.4-24.3
Drank Alcohol in Past 30 Days	539	20.1	16.7-24.0
No Alcohol in Past 30 Days	853	23.3	20.3-26.5
Binge Drinker	*	*	*
Not a Binge Drinker	1,367	22.2	19.9-24.7
Heavy Drinker	*	*	*
Not a Heavy Drinker	1,369	22.1	19.8-24.6
Hypertension	748	14.8	12.3-17.7
No Hypertension	649	30.3	26.5-34.4
High Blood Cholesterol	577	18.3	15.1-21.9
No High Blood Cholesterol	705	22.5	19.2-26.1

Table 48 (continued) No Flu Shot, Ages 65 and Older, Within the Past 12 Months for Selected Health Behaviors and Conditions, 2003			
Health Behavior or Condition	# Respondents	% No Flu Shot	95% CI
No Mammogram within Past Two Years (40+)	185	40.7	33.1-48.7
Mammogram within Past Two Years (40+)	685	18.5	15.5-21.8
Insufficient Cervical Cancer Screening	136	32.7	24.7-41.8
Sufficient Cervical Cancer Screening	381	20.7	16.7-25.4
No Health Insurance (18-64)	-	-	-
Health Insurance (18-64)	-	-	-
Employer Based Health Insurance Coverage (18-64)	-	-	-
Private Plan (18-64)	-	-	-
Medicaid or Medical Assistance (18-64)	-	-	-
The Military, CHAMPUS, TriCare, or the VA (18-64)	-	-	-
The Indian Health Service (18-64)	-	-	-
No Pneumonia Shot (65+)	500	46.4	41.6-51.3
Pneumonia Shot (65+)	874	8.2	6.4-10.5
Diabetes	239	13.2	9.3-18.5
No Diabetes	1,160	23.9	21.4-26.8
Current Asthma	111	10.2	5.9-17.1
Former Asthma	*	*	*
Never Had Asthma	1,255	23.3	20.9-26.0
Arthritis	828	19.7	16.9-22.8
No Arthritis	558	25.6	21.8-29.8
Arthritis - Activities Limited	383	16.9	13.3-21.3
No Arthritis - Activities Limited	1,000	24.0	21.2-27.0
Disability - Activities Limited	456	18.1	14.7-22.3
No Disability - Activities Limited	925	23.9	21.0-27.1
Disability with Special Equipment Needed	235	16.7	12.4-22.2
No Disability with Special Equipment Needed	1,149	23.0	20.4-25.7
Injured in a Fall (45+)	*	*	*
Not Injured in a Fall (45+)	1,316	22.4	20.0-24.9
Sunburn in Past 12 Months	148	22.2	15.7-30.4
No Sunburn in Past 12 Months	1,247	22.1	19.7-24.7
Military Veteran	353	15.3	11.8-19.6
Not a Military Veteran	1,027	24.7	21.9-27.7

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2003

Note: *Results based on sample sizes less than 100 have been suppressed.

Table 49, below, illustrates respondent reasons for not getting a flu shot. Over half of the respondents, 52.7 percent, stated they did not think they needed one, while 26 percent stated the shot could give me the flu/allergic reaction/health problems.

Table 49 Respondents, Ages 65 and Older, Main Reason for Not Getting a Flu Shot, 2003	
Number of Respondents	313
Didn't think I needed one	52.7%
Shot could give me the flu/allergic reaction/health problems	26.0%
Didn't think of it/forgot/missed it	9.2%
Not recommended by doctor	1.6%
Not physically able to get to the clinic	1.0%
Vaccine not available/clinic didn't get their shipment	1.0%
Other	8.5%

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2003

NO PNEUMONIA SHOT

Definition: Respondents ages 65 and older who have never had a pneumonia vaccination.

Prevalence of No Pneumonia Shot

- South Dakota 36.3%
- There is no nationwide percent for never having a pneumonia shot for ages 65 and older

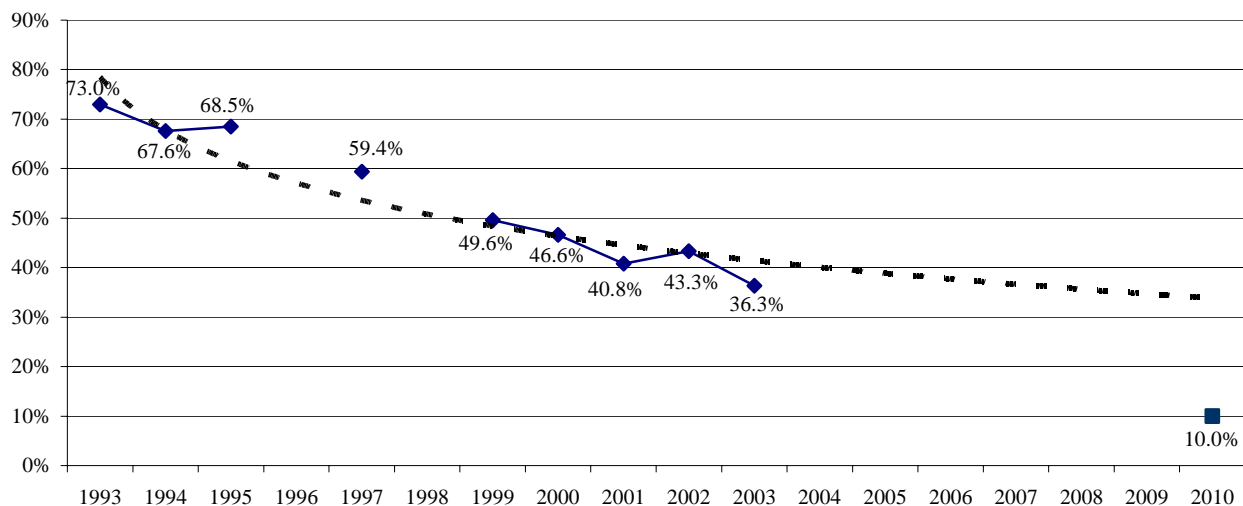
Healthy People 2010 Objective

Decrease the proportion of adults age 65 years and older who have never been vaccinated against pneumococcal disease to 10 percent.

Trend Analysis

Overall, the percent of respondents aged 65 and older who have never had a pneumonia shot has been decreasing. South Dakota has not yet met the *Healthy People 2010 Objective* of 10 percent.

Figure 39
Percent of Respondents, Ages 65 and Older, Who Have Never Had a Pneumonia Shot, 1993-2003



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 1993-2003

Demographics

- Gender** There is no appreciable difference in the percent of those not ever getting a pneumonia shot between males and females overall or for any demographic group between the two. However, it should be noted that many demographic groups could not be analyzed because the sample sizes are too small.
- Age** Lack of a pneumonia shot greatly decreases for males from the 65-74 age group to the 75 and older group, however this decrease is not nearly as evident for females.
- Race** There is insufficient data to make any racial comparisons.
- Region** There are no considerable differences among the four geographic regions with sufficient sample sizes for comparison.

Household Income	Lack of a pneumonia shot does not seem to change greatly as household income changes, however the upper two household incomes had sample sizes too small for analysis.
Education	The lack of a pneumonia shot does not seem to change as education levels change.
Employment Status	Those who are employed for wages demonstrate a much higher rate of no pneumonia shot than those who are retired.
Marital Status	There is no appreciable difference among the marital status, but only two had sufficient sample sizes for comparison.

Table 50 Respondents, Ages 65 and Older, Who Have Never Had a Pneumonia Shot, 2003									
	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Total	1,375	36.3	(33.5-39.2)	497	37.1	(32.5-41.9)	878	35.8	(32.4-39.3)
Age									
18-24	-	-	-	-	-	-	-	-	-
25-34	-	-	-	-	-	-	-	-	-
35-44	-	-	-	-	-	-	-	-	-
45-54	-	-	-	-	-	-	-	-	-
55-64	-	-	-	-	-	-	-	-	-
65-74	679	41.7	(37.6-45.9)	268	43.8	(37.3-50.4)	411	39.9	(34.8-45.2)
75+	696	31.8	(28.1-35.7)	229	30.1	(24.0-36.9)	467	32.8	(28.3-37.7)
Race									
White	1,301	36.5	(33.7-39.5)	465	36.7	(32.1-41.7)	836	36.4	(32.9-40.1)
American Indian	*	*	*	*	*	*	*	*	*
Region									
Southeast	308	39.2	(33.6-45.1)	107	41.4	(32.0-51.5)	201	37.7	(30.9-45.0)
Northeast	428	37.3	(32.5-42.4)	157	38.8	(31.0-47.2)	271	36.2	(30.3-42.5)
Central	198	34.2	(27.4-41.7)	*	*	*	*	*	*
West	366	32.6	(27.7-37.9)	130	35.3	(27.2-44.3)	236	30.7	(24.8-37.2)
American Indian Counties	*	*	*	*	*	*	*	*	*
Household Income									
Less than \$15,000	279	33.7	(27.8-40.0)	*	*	*	*	*	*
\$15,000-\$19,999	195	37.3	(30.1-45.2)	*	*	*	*	*	*
\$20,000-\$24,999	198	35.6	(28.6-43.3)	*	*	*	*	*	*
\$25,000-\$34,999	205	32.8	(26.0-40.4)	*	*	*	*	*	*
\$35,000-\$49,999	139	38.4	(30.0-47.5)	*	*	*	*	*	*
\$50,000-\$74,999	*	*	*	*	*	*	*	*	*
\$75,000+	*	*	*	*	*	*	*	*	*
Education									
Less than High School	328	38.5	(32.9-44.5)	147	40.3	(31.9-49.2)	181	36.8	(29.4-44.9)
High School or G.E.D.	527	34.8	(30.4-39.4)	175	34.3	(27.1-42.4)	352	35.0	(29.8-40.7)
Some Post-High School	300	37.8	(31.9-44.2)	*	*	*	*	*	*
College Graduate	212	35.6	(28.8-43.1)	*	*	*	*	*	*
Employment Status									
Employed for Wages	129	47.6	(37.9-57.4)	*	*	*	*	*	*
Self-employed	102	46.0	(35.5-56.9)	*	*	*	*	*	*
Unemployed	*	*	*	*	*	*	*	*	*
Homemaker	*	*	*	*	*	*	*	*	*
Retired	1,073	33.8	(30.7-37.0)	377	34.7	(29.6-40.1)	696	33.1	(29.4-37.0)
Unable to Work	*	*	*	*	*	*	*	*	*

Table 50 (continued)									
Respondents, Ages 65 and Older, Who Have Never Had a Pneumonia Shot, 2003									
	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Marital Status									
Married/Unmarried Couple	610	37.2	(33.2-41.4)	322	37.7	(32.3-43.5)	288	36.5	(30.8-42.6)
Divorced/Separated	*	*	*	*	*	*	*	*	*
Widowed	614	32.5	(28.6-36.7)	101	28.3	(19.6-39.1)	513	33.4	(29.1-37.9)
Never Married	*	*	*	*	*	*	*	*	*

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2003

Note: *Results based on sample sizes less than 100 have been suppressed.

Further Analysis

Following are data illustrating the percent of those ages 65 and older who have never had a pneumonia shot for various health behaviors and conditions. For example, 27.3 percent of respondents who stated they have fair or poor health had no pneumonia shot, while 39.9 percent of respondents who stated they have excellent, very good, or good health had no pneumonia shot.

Table 51 No Pneumonia Shot, Ages 65 and Older, for Selected Health Behaviors and Conditions, 2003			
Health Behavior or Condition	# Respondents	% No Pneumonia Shot	95% CI
Fair or Poor Health Status	389	27.3	22.6-32.6
Excellent, Very Good, or Good Health Status	978	39.9	36.5-43.4
Obese	287	33.6	27.7-40.1
Overweight	820	34.6	31.0-38.3
Not Overweight	504	38.8	34.2-43.7
No Leisure Time Physical Activity	460	37.7	32.9-42.8
Leisure Time Physical Activity	915	35.6	32.3-39.1
No Moderate Physical Activity	864	36.0	32.5-39.6
Moderate Physical Activity	450	38.7	33.8-43.8
No Vigorous Physical Activity	1,256	35.9	33.0-38.9
Vigorous Physical Activity	*	*	*
Not Doing Anything to Control Weight	454	38.3	33.4-43.3
Trying to Lose or Maintain Weight	918	35.6	32.3-39.2
Less Than Five Servings of Fruits and Vegetables	957	37.8	34.5-41.3
At Least Five Servings of Fruits and Vegetables	418	33.1	28.3-38.3
Current Smoker	133	38.1	29.2-47.9
Former Smoker	547	32.1	28.0-36.5
Never Smoked	693	39.6	35.6-43.7
Smokeless Tobacco Use	*	*	*
No Smokeless Tobacco Use	1,330	36.1	33.3-39.1
Drank Alcohol in Past 30 Days	534	37.1	32.7-41.8
No Alcohol in Past 30 Days	835	35.3	31.8-39.0
Binge Drinker	*	*	*
Not a Binge Drinker	1,344	35.9	33.1-38.8
Heavy Drinker	*	*	*
Not a Heavy Drinker	1,347	36.2	33.4-39.1
Hypertension	734	31.3	27.7-35.1
No Hypertension	639	42.0	37.9-46.3
High Blood Cholesterol	569	31.2	27.1-35.6
No High Blood Cholesterol	696	37.0	33.1-41.1

Table 51 (continued)
No Pneumonia Shot, Ages 65 and Older, for Selected Health Behaviors and Conditions, 2003

Health Behavior or Condition	# Respondents	% No Pneumonia Shot	95% CI
No Mammogram within Past Two Years (40+)	182	47.6	39.6-55.7
Mammogram within Past Two Years (40+)	673	32.5	28.7-36.5
Insufficient Cervical Cancer Screening	136	46.8	37.7-56.2
Sufficient Cervical Cancer Screening	376	36.6	31.3-42.1
No Health Insurance (18-64)	-	-	-
Health Insurance (18-64)	-	-	-
Employer Based Health Insurance Coverage (18-64)	-	-	-
Private Plan (18-64)	-	-	-
Medicaid or Medical Assistance (18-64)	-	-	-
The Military, CHAMPUS, TriCare, or the VA (18-64)	-	-	-
The Indian Health Service (18-64)	-	-	-
No Flu Shot (65+)	322	76.3	70.6-81.1
Flu Shot (65+)	1,052	25.0	22.2-28.0
Diabetes	237	26.2	20.4-33.0
No Diabetes	1,138	38.5	35.4-41.7
Current Asthma	109	10.3	5.2-19.4
Former Asthma	*	*	*
Never Had Asthma	1,233	39.2	36.2-42.2
Arthritis	815	33.2	29.7-36.9
No Arthritis	547	41.2	36.7-45.8
Arthritis - Activities Limited	377	33.0	28.0-38.6
No Arthritis - Activities Limited	983	37.7	34.4-41.1
Disability - Activities Limited	449	31.9	27.3-36.9
No Disability - Activities Limited	908	38.7	35.2-42.2
Disability with Special Equipment Needed	231	31.0	24.7-38.1
No Disability with Special Equipment Needed	1,129	37.3	34.3-40.5
Injured in a Fall (45+)	*	*	*
Not Injured in a Fall (45+)	1,292	36.3	33.4-39.2
Sunburn in Past 12 Months	145	38.2	30.0-47.1
No Sunburn in Past 12 Months	1,227	36.2	33.2-39.2
Military Veteran	345	33.7	28.4-39.4
Not a Military Veteran	1,011	37.4	34.1-40.8

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2003

Note: *Results based on sample sizes less than 100 have been suppressed.